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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/052,534 | 01/23/2002 | Takayuki Toshima | 33082M115 | 3236 |

441 7590 12/07/2007
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WASHINGTON, DC 20036

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| EXAMINER |
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BLAN, NICOLE R

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| ART UNIT | PAPER NUMBER |
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1792

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| MAIL DATE | DELIVERY MODE |
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12/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/052,534 | Applicant(s) TOSHIMA ET AL. | |
| | Examiner Nicole Blan | Art Unit 1792 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendments to claims 1, 3, and 35 filed on October 3, 2007 have been acknowledged.
2. The Examiner withdraws the claim objection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-9 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka et al. (U.S. Patent 6,431,190), in view of Akimoto (U.S. Patent 5,868,865), in view of JP61-98351, and further in view of Mahneke (U.S. Patent 6,398,926).

The combined teaching of Oka/Akimoto provides an object processing apparatus comprising the structural elements as instantly claimed. The teaching of Oka/Akimoto has been presented in the previous office action and is fully incorporated here. The teaching of Oka/Akimoto remains silent about the rear shielding plate 15 (reads on "a lower side member",

as instantly claimed) comprising a coating of hydrophobic resin on a surface of the rear shielding plate body.

JP'351 teaches substrate processing apparatus for processing a substrate with processing liquid fed to the substrate. The apparatus of JP'351 comprises plate shaped bodies (shielding plates) facing both sides of the substrate, wherein the processing liquid is supplied into each space formed between the plate body and surface of the substrate (Fig. 1). JP'351 specifically indicates that plate shaped body made of Teflon (hydrophobic resin) improves wetting of the substrate by processing liquid supplied into the narrow space between the plate body and surface of the substrate (Abstract; page 2). Therefore, since both Oka/Akimoto and JP'351 are concerned with providing a processing liquid into the narrow space between the substrate and the shielding plate and JP'351 teaches that hydrophobic surface of the plate shaped body enhances wetting of the substrate by processing liquid supplied into the narrow space between the substrate and plate, one skilled in the art motivated by JP'351 would have found obvious to provide hydrophobic resin onto the surface of the rear shielding plate in order to improve wetting of the object while processing it with the apparatus of Oka/Akimoto.

The teaching of Oka/Akimoto and JP'351 remain silent about coating a metal plate with a hydrophobic resin. However, Mahneke teaches using a chuck made from metal and coated with a hydrophobic resin [col. 3, lines 64-67; col. 4, lines 60-67; col. 5, lines 1-24]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the liquid processing apparatus of JP'351 to include a plate made of metal and coated with Teflon as disclosed by Mahneke with reasonable success to provide improved structural strength to the plate and by having the same surface properties of Oka/Akimoto.

Response to Arguments

6. Applicant's arguments with respect to claims 1-9 and 35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reick (U.S. Patent 3,799,832).

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Blan whose telephone number is 571-270-1838. The examiner can normally be reached on Monday - Thursday 8-5 and alternating Fridays 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NRB



ALEXANDER MARKOFF
PRIMARY EXAMINER

